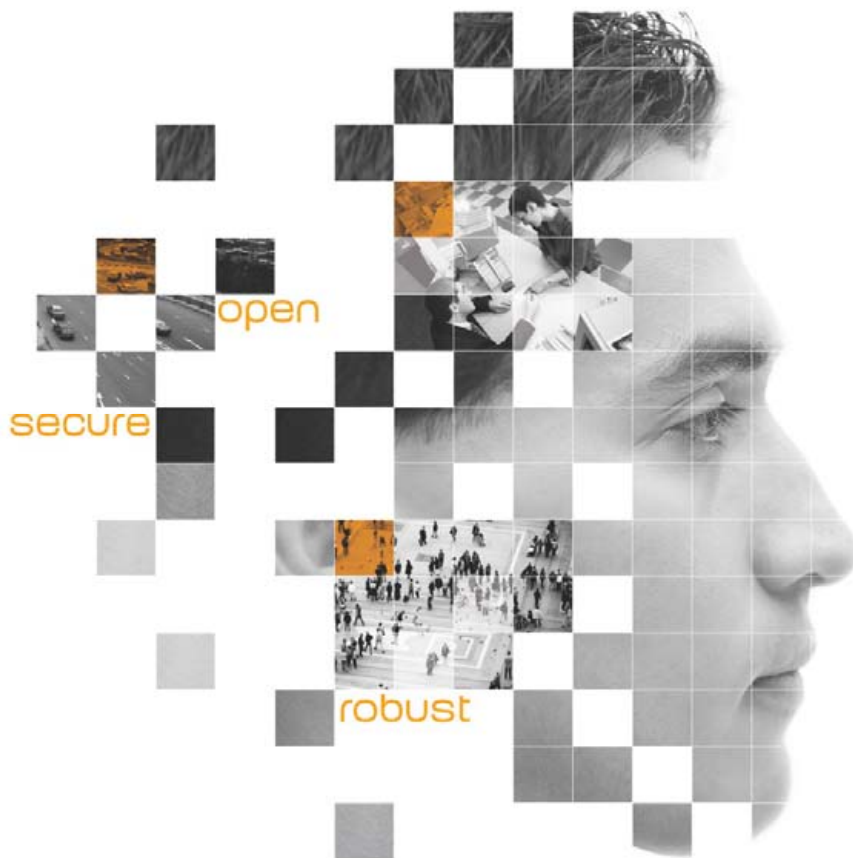




NETAVIS

Observer II R1.11.0

Supported Video Sources



NETAVIS Observer II R1.11.0 Supported Video Sources

Document version V2

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1. Introduction

This *NETAVIS Observer II Supported Video Sources* manual provides a concise specification of the supported IP cameras.

If you have questions that are not answered here, please contact your NETAVIS distribution partner, or direct to our Product management team by e-mail info@netavis.net or telephone +43 (1) 503 17 22. We wish you interesting and productive experience with NETAVIS.

Your NETAVIS Team.

The NETAVIS Observer II documentation set

These documents are available:

- *NETAVIS Observer II User Manual*
- *NETAVIS Observer II Supported Video Sources*
- *NETAVIS Observer II Server Installation and Administration*
- *NETAVIS Observer II Server Distributed AS Administration*
- *NETAVIS Observer II Server and Client Requirements*
- *NETAVIS Observer II Server Customizing*
- *NETAVIS Observer II SNAP XML Interface*

All these documents are available online as PDFs directly on each NETAVIS Observer II server via the standard web interface and also from each client via the **Info** menu at the lower right corner.

2. Supported IP cameras

Axis (www.axis.com)

Device	Tested firmware	Image Channels	MPEG4	Audio	I/O	PTZ	Aspect ratio	QCIF	FTP/HTTP	Comment and supported since release	I1	I2
205	4.04	20	-	-	-	-	VGA	✓	- / -		96	✓
206	4.21	10	-	-	-	-	VGA	✓	- / -		94	✓
206W		10	-	-	-	-	VGA	✓	- / -			✓
206M ¹	4.20	10	-	-	-	-	VGA	-	- / -		93	✓
207/207W	4.22	10	✓	AAC, mic	1/1	-	VGA	✓	- / -	R1.9.0	74	✓
207MW ¹	4.40	20	✓	mic ²	1/1	-	VGA	✓	- / -	R1.8.6	79	✓
209FD-R	4.43	20	✓	-	-	-	VGA	✓	✓ / -	R1.9.5		✓
210	4.30	20	✓	-	1/1	-	VGA	✓	✓ / -		92	✓
210A	4.30	20	✓	mic, spk ²	1/1	-	VGA	✓	✓ / -			✓
211	4.20	20	✓	-	1/1	-	VGA	✓	✓ / -		90	✓
211A	4.30	20	✓	mic, spk ²	1/1	-	VGA	✓	✓ / -		70	✓
211M ¹	4.40	20	✓	mic, spk ²	1/1	-	VGA	✓	✓ / -	R1.9.5		
211W	4.40	20	✓	mic, spk ²	1/1	-	VGA	✓	✓ / -	R1.9.5		✓
212	4.34, 4.35	20	✓	mic, spk ²	1/1	✓	VGA	✓	✓ / -	R1.9.0		✓
213	4.30	20	✓	mic, spk ²	2/3	✓	CIF	✓	✓ / -	Mic + spk + I/O via connection module only	90	✓
214	4.32	20	✓	mic, spk ²	1/1	✓	CIF	✓	✓ / -			✓
215PTZ	4.40	20	✓	mic, spk ²	1/1	✓	CIF	✓	✓ / -	R1.9.5		✓
216FD	4.34	20	✓	mic, spk ²	1/1	-	VGA	✓	✓ / -	Fixed PTZ	95	✓
221	4.20	20	✓	-	2/1	-	VGA	✓	✓ / -	R1.5.4	91	✓
223M ³	4.41	20	✓	mic ²	2/1	-	VGA	✓	✓ / -	R1.9.0	95	✓
225FD	4.31	20	✓	-	2/1	-	VGA	✓	✓ / -	Fixed PTZ	79	✓
231D		20	✓	-	4/4	✓	CIF	✓	✓ / -			✓
232D/D+	4.30	20	✓	-	4/4	✓	CIF	✓	✓ / -	D+ MPEG can only be streamed via Multicast, R1.8.0	91	✓
233D	4.40	20	✓	mic, spk ²	4/4	✓	CIF	✓	✓ / -	R1.9.5		✓
2100	2.40	10	-	-	1/1	-	VGA	-	- / -		19	✓
2110		10	-	-	1/1	-	VGA	-	- / -			
2120	2.43	10	-	-	1/1	-	CIF	-	- / -		97	✓
2130	2.43	10	-	-	1/1	✓	CIF	✓	- / -		62	✓
2420		10	-	-	1/1	✓	CIF	-	- / -			
240Q	4.30	20	-	-	4/4	✓	CIF	✓	✓ / -	4 channels, R1.9.0		

¹ When LARGE size is selected NetAVIS downloads SXGA (1280 x 1024) frames

² Supported formats: G711 ulow, G726 24bit, G726 32bit, AAC 16bit. It is the responsibility of the user to set the audio format manually in the camera's Web interface.

³ When LARGE size is selected NetAVIS downloads UXGA (1600 x 1200) frames for JPEG

Device	Tested firmware	Image Channels	MPEG4	Audio	I/O	PTZ	Aspect ratio	QCIF	FTP/HTTP	Comment and supported since release	I1	I2
241Q	4.30	20	✓	-	4/4	✓	CIF	✓	✓ / -	4 channels		✓
241QA	4.30	20	✓	mic, spk ²	4/4	✓	CIF	✓	✓ / -	4 channels	77	✓
241S		20	✓	-	4/4	✓	CIF	✓	✓ / -	1 channel		
241SA	4.30	20	✓	mic ²	4/4	✓	CIF	✓	✓ / -	1 channel	78	✓
243SA		20	✓	mic, spk ²	4/4	✓	CIF	✓	✓ / -	1 channel, R1.9.0	78	✓
243Q		20	✓	-	4/4	✓	CIF	✓	✓ / -	4x1 channel, R1.10.0		
247S	4.40	20	✓	mic ²	1/1	-	CIF	✓	✓ / -	1 channel, R1.9.5		✓
2400(+)		10	-	-	4/1	✓	CIF	✓	- / -	4 channels, QCIF only at (+) models ?		
2401(+)		10	-	-	4/1	✓	CIF	✓	- / -	1 channel, QCIF only at (+) models ?		
2411	3.13	10	-	-	-	-	CIF	✓	- / -	1 channel	98	✓
292	-	-	-	-	-	-	-	-	- / -	Video decoder, R1.10.0		

Mobotix (www.mobotix.com)

Device	Tested firmware	Image Channels	MPEG4	Audio	I/O	PTZ	Aspect ratio	QCIF	FTP/HTTP	Comment and supported since release	I1	I2
M1	3.1.2	2	-	-	-	-	VGA	✓	- / -		212	✓
M10 ⁴	4.0.3	2	-	-	-	-	VGA	✓	✓ / -		244	✓
M22 ⁴	5.2.2, 5.2.3	1	-	-	-	-	VGA	✓	✓ / -		235	✓
M12 ⁴	5.3.10	2	-	-	-	-	VGA	✓	✓ / -	R1.8.6	236	✓

When using dual lens cameras you can assign the left, right, both or auto lens modes when selecting port 1, 2, 3, 4 respectively in the NETAVIS Camera Administration tool.

⁴ When LARGE size is selected NetAVIS downloads 1280 x 960 frames

Sony (www.sonybiz.net)

Device	Tested firmware	Image Channels	MPEG4	Audio	I/O	PTZ	Aspect ratio	QCIF	FTP/HTTP	Comment and supported since release	I1	I2
SNC-CS3	1.04	1	-	-	-	-	VGA	✓	- / -	R1.5.0	85	✓
SNC-CS50	1.03	1	-	-	-	-	VGA	✓	✓ / -	Transmits only one image per event, R1.8.0	86	✓
SNC-DF40		1	-	-	-	-	VGA	✓	- / -	R1.6.1		
SNC-DF70	1.04	1	-	-	-	-	VGA	✓	- / -	R1.6.1	83	✓
SNC-M1		1	-	-	-	-	VGA	✓	- / -	R1.5.0		
SNC-P1		1	-	-	-	-	VGA	✓	- / -	R1.5.0		
SNC-P5	1.03, 1.02	1	-	-	-	✓	VGA	✓	- / -		73,81	✓
SNC-RZ25	1.03	1	-	-	-	✓	VGA	✓	- / -	R1.5.1	82	✓
SNC-RZ30	3.03	1	-	-	-	✓	VGA	✓	- / -		80	✓
SNC-Z20	1.02	1	-	-	-	✓	VGA	✓	- / -	Zoom only, R1.5.0	84	✓
SNC-RX550	1.03	1	-	-	-	✓	VGA	✓	✓ / -	Transmits only one image per event	87	✓
SNC-CS10	1.01	1	-	-	-	-	VGA	✓	- / -	R1.8.0	86	✓
SNC-CS11	1.01	1	-	-	-	-	VGA	✓	- / -	R1.8.0	87	✓
SNT-V501		1	-	-	-	-	?	?	- / -	1 channel, R1.5.0		
SNT-V704	1.28	4 x 1	-	-	-	-	VGA	-	- / -	4 channel	88	

Panasonic (www.panasonic.com/bps_sec_cameras)

Device	Tested firmware	Image Channels	MPEG4	Audio	I/O	PTZ	Aspect ratio	QCIF	FTP/HTTP	Comment and supported since release	I1	I2
BB-HCM311	1.28B	>2	-	-	-	✓	VGA	-	✓ / -	PT only	115	✓
BB-HCM381	1.28B	>2	-	-	-	✓	VGA	✓	✓ / ✓	R1.5.0	110	✓
WV-NF284	1.00E4	1	✓	-	-	✓	VGA	-	✓ / -	Digital zoom only, R1.9.5		✓
WV-NP472	2.20/P	1	-	-	-	-	VGA	✓	✓ / ✓	R1.8.0	111	✓
WV-NS324	2.20EE	1	-	-	-	✓	VGA	✓	✓ / ✓	R1.8.0	112	✓
WV-NP244	1.092, 1.22E2	>2	-	-	-	✓	VGA	-	✓ / -	Digital zoom only, R1.8.0	113	✓
WV-NP1004	1.07E3, 1.21PO	1	-	-	-	✓	VGA	-	✓ / -	Digital zoom only, R1.8.0	114	✓
WV-NS202	1.10PB		✓	-	-	✓	VGA	-	✓ / -	R1.9.0	116	✓
WV-NW484	1.02E1	1	✓	-	-	✓	VGA	-	✓ / -	Digital zoom only, R1.9.5		✓

ACTi (www.acti.com)

Device	Tested firmware	Image Channels	MPEG4	Audio	I/O	PTZ	Aspect ratio	QCIF	FTP/HTTP	Comment and supported since release	I1	I2
SED-2120	A1D-M2N-V2.05.12-AC	1	✓	-	-	-	CIF	✓	- / -	1 channel MPEG4 only, R1.9.0	90	✓
CAM-6500	A1D-M2N-V2.05.12-AC	1	✓	L16, mic	-	✓	CIF	✓	- / -	1 channel MPEG4 only	99	✓

Eneo (www.eneo-security.com)

Device	Tested firmware	Image Channels	MPEG4	Audio	I/O	PTZ	Aspect ratio	QCIF	FTP/HTTP	Comment and supported since release	I1	I2
GLC-1401	1.28	1	-	-	-	-	CIF	-	- / -	R1.9.5		✓
NTC4101		1	✓	-	-	✓	CIF	✓	- / -	Zoom only, R1.11.0	31	
NTC2101	4.1.2-12VT	1	✓	-	-	-	CIF	✓	- / -	R1.9.5	26	
NTD6101/18	4.1.2-12VT	1	✓	L16, mic	-	✓	CIF	✓	- / -	R1.9.5, PTZ + audio since R1.11.0	27	
NTD4101		1	✓	L16, mic	-	✓	CIF	✓	- / -	R1.11.0	30	
NTD2101		1	✓	-	-	-	CIF	✓	- / -	R1.11.0	29	
NTS2101	4.1.2-4	1	✓	L16, mic	-	-	CIF	✓	- / -	1 channel, R1.9.5, audio since R1.11.0	24	

Explanations for the IP camera table columns

Tested firmware:	The camera has been tested together with NETAVIS with this firmware revision.
Image channels:	Indicates how many parallel channels of different formats can at maximum be streamed by the camera.
MPEG4:	The camera is capable of MPEG4 streaming and NETAVIS supports it.
Audio:	Shows whether the camera supports audio with the following features: <ul style="list-style-type: none"> • mic: camera has microphone • spk: camera has speaker
I/O:	Shows how many input and/or output contacts the camera offers.
PTZ:	Indicates whether the camera supports PTZ (pan/tilt/zoom). The comment column may show more details.
Aspect ratio:	Describes what aspect ratio the camera supports (please refer also to the table Image sizes and aspect ratios above).
QCIF:	Indicates whether the camera also supports QCIF (quarter of a CIF) resolution which corresponds to the NETAVIS “Small” resolution.
FTP/HTTP:	The camera also supports alarm picture transport via FTP/HTTP upload (refer to <i>Camera setup for in-camera motion detection (FTP-based)</i> below).
I1, I2:	For internal use only.

Image sizes and aspect ratios

NETAVIS size	VGA	CIF	CIF with aspect ratio correction ⁵
Small (QCIF)	160 x 120	176 x 144	192 x 144
Medium	320 x 240	352 x 288	384 x 288
Large	640 x 480 or megapixel if supported by camera	704 x 576 or megapixel if supported by camera	768 x 576

⁵ Selectable by Axis 213, Axis 232D. Please do not use aspect ratio correction since the images will be distorted.

3. Camera setup for in-camera motion detection (FTP-based)

Many IP cameras and video servers support in-camera motion detection and upload (push) of these event triggered images via FTP or HTTP to a video management system like NETAVIS. NETAVIS implements a general mechanism to handle this feature. However, the actual configuration of the motion detection algorithms must be done in the camera since each camera implements its own way of setting the parameters.

For setup of in-camera motion detection in NETAVIS please refer to the *NETAVIS Observer II User Manual*.

Below you find how to setup this feature in the camera so that it works together with NETAVIS.

Note: After setting up the camera:

- Do not forget to check and set the date and time of the camera to reflect your current time.
- Configure NETAVIS for in-camera motion detection by selecting the **Receive event images via FTP** in the **Camera Admin** dialog too.
- Please note that when you change the value of an alarm parameter in the camera NETAVIS will have no notion about it. In this version of NETAVIS to reflect your changes you have to force the software to reread these parameters. To do so please change the state of the **Receive event images via FTP** checkbox first to unchecked, save your changes. Then make your changes in the camera and save it. When you have finished change the state of the checkbox (in the NETAVIS client) back to checked and save your changes again.

Axis

1. Start a browser connection to your camera and go to its setup page.
2. Select **Event Configuration**. In this step we will setup the FTP server. Please click on the **Event Servers** item. The right side of your screen contains the list of currently defined servers or the list should be empty. To enter a new server, please click on the **Add FTP...** right below the list. For **Name** enter the common name of your server. Into the **Network address** field please enter the IP address of the server where this camera is connected to (e.g. 192.168.6.2). For the **Upload path** enter **ftp**. In the login part use **ftp** for **Login name** and **a@b** for **Password**. Now you can test the connection. If the test was completed with success, save your changes by clicking the **OK** button.
3. In this step we define a motion detection window which will trigger events. To do it please click on the **Motion Detection** item on the left. Drag and resize the available windows to areas which you want to make sensitive for motion, or create new ones. Set the sensitivity and other parameter values to your needs and save it.
4. Now we define an action which binds the event to a server. To do it please select **Event Types** from the item list on the left. This action will transfer trigger frames to the FTP server we've defined above. To define a new action click on **Add triggered...** right below the list. Leave the top two parts and start your editing in the **Triggered by...** part. Select **Motion detection** from the drop-down list and the name of the window from the **In window** drop-down. Leave the **when motion detection** on **start**. In the next part check the **Upload images**. Set **FTP** for **Select upload type** and your server as **Primary**. Check the **Include pre-trigger buffer** and **Include post-trigger buffer** items and set values for your needs. For the **Base file name** enter **cameraID_%s.%f.jpg** (substitute cameraID with the numeric ID assigned to the camera in NETAVIS, e.g. 20) and below it the **Overwrite/Use Own file format** radio button. This will ensure that NETAVIS can parse and identify the uploaded images. Entering the correct file name is very important, files having different names will be discarded! At the end of the definition click **OK** to save your changes.

Mobotix

1. Start a browser connection to your camera and go to its setup page.
2. Select **Admin Menu**. In this step we will setup the FTP server and profile. Please click on the **FTP Profiles** item. Starting from the top please enter the IP address of the server where this camera is

connected to (e.g. 192.168.6.2). In the login part use **ftp** for **User name** and **a@b** for **Password**. Leave the **Connection** on **Passive FTP**.

3. To setup a profile scroll down to **FTP Profile 2: FTP-AlarmClip**. For the **Directory Name** use **ftp**. Do not forget to include the "/" at the end! For **File Name** enter **cameraID_\$(TMS.TIMET).jpg** (substitute cameraID with the numeric ID assigned to the camera in NETAVIS, e.g. 20). For **File Type** select **MxPEG or JPEG clip** and **Clip as JPEG file(s)** for **Clip File Type**. For frame rate and pre/post times enter the values for your needs. At the end of the definition click **Set** to save your changes.
4. Now we define a motion detection event and an action which binds the event to a server. To do it please select **Setup Menu**, then **Event Settings** from the item list. Check the **Video Motion Window** and define rectangles for your needs. Click **Set** to save your changes. To define the action click on **Actions**. Enable the profile and select **VM - Video Motion** from the **Event Selection** list. In the Actions part select **FTP-AlarmClip** from the **File Transfer Action** drop-down list. Click **Set** to save your changes. To turn on event generation go into **General Event Settings** and enable arming.

Sony

1. Start a browser connection to your camera and go to its setup page.
2. Select **Setting**. In this step we will setup the FTP server. Please click on the **FTP client** item. Starting from the top select **On** for the **FTP client function**, then enter the IP address of the server where this camera is connected to (e.g. 192.168.6.2). In the login part use **ftp** for **User name** and **a@b** for **Password**. Leave the **Passive mode** on **Off**. At the end of the definition click **OK** to save your changes.
3. Now change to the **Alarm sending** tab, turn **Alarm sending** on. For **Remote path** use **ftp**. For the **Image file name** enter **cameraID_** (substitute cameraID with the numeric ID assigned to the camera in NETAVIS, e.g. 20). For **Suffix** use **Date & time**. For **Alarm** select **Object detection** and for **Effective period** **Always**. Leave the **Alarm buffer** unchecked. At the end of the definition click **OK** to save your changes.
4. To define a motion detection window please select **Object detection** from the item list. Define your motion windows tune detection parameters and save your changes.

Panasonic BB-HCM381, BB-HCM311

1. Start a browser connection to your camera and go to its **Setup** page.
2. Select **Trigger**. To setup a motion detection trigger with FTP please click on one of the numbers e.g. 1. This will start a wizard which navigates you through the whole setup procedure. Please fill in at least the following:
 - Check **Enable Image Buffer/Transfer**, select **Motion Detection** for **Trigger**, then click on **Next>**.
 - Check **Always**, then click on **Next>**.
 - Leave **Lens Position When Triggered** as it is, then click on **Next>**.
 - Leave **Image Setting** as it is, then click on **Next>**.
 - Check **Enable Pre-trigger Image Buffer** and set the number of images you wish to be included. Do the same for port-trigger images, then click on **Next>**.
 - Select **FTP** for **Transfer Method**, then click on **Next>**.
 - On the **FTP** page enter the IP address of the server where this camera is connected to (e.g. 192.168.6.2). In the login part use **ftp** for **Login ID** and **a@b** for **Password**. For **Upload File Name** use **ftp/cameraID_** (substitute cameraID with the numeric ID assigned to the camera in NETAVIS, e.g. 20). For **Overwrite Setting** select **Save as New File with Time Stamp**. For **Data Transfer Mode** use **Passive mode**. Leave all other fields unchanged. Now click on **Next>**.
 - Leave **E-mail notification when triggered** as it is, then click on **Next>**. On the last page please click **Save** to save our modifications.
3. To define motion detection and parameters please select **Motion detection** from the item list. After fine-tuning your motion detection parameters do not forget to save your changes.

Panasonic WV-NP472 and WV-NS324

1. Start a browser connection to your camera and go to its **Setup Menu** page.
2. First we will setup alarm recording and FTP client parameters. To do so please select **Alarm**. Scroll down to the **Recording Setup** section and enter the desired number of pre/post alarm frames and their frame rates. Click on **SET & REBOOT** to save your modifications.
3. Now select the **FTP Client** page. Fill out the **Common Setup** part as follows:
 - Enter the IP address of the server where this camera is connected to (e.g. 192.168.6.2). In the login part use **ftp** for **User Name** and **a@b** for **Password**. Leave **Passive Mode** checked. Set **FTP Enable Time 1** from **0:00** to **23:59** and check all days of the week.
 - Now scroll down to the **Alarm FTP Transmission Setup** section. Turn transmission **ON**. For **Directory** use **ftp**. For **File Name** enter cameraID_ (substitute cameraID with the numeric ID assigned to the camera in NETAVIS, e.g. 20). Click on **SET & REBOOT** to save your modifications.
4. To define motion detection and parameters return to the main page of your camera and select **Camera Setup**. Using the on-screen menu set motion windows and parameters. After fine-tuning the parameters do not forget to save your changes.

Panasonic WV-NP244 and WV-NP1004

1. Start a browser connection to your camera and go to its **Setup** page.
2. Now we will setup alarm recording parameters. To do so please select **Alarm Setup**. In the **Alarm setup** section enable the **VMD alarm** by selecting the **On** radio button. Click on **SET** to save your modifications.
3. Scroll down to the **Alarm image setup** section select **On** for **Alarm image FTP transmission**. For **Directory** use **ftp**. For **File Name** enter cameraID_ (substitute cameraID with the numeric ID assigned to the camera in NETAVIS, e.g. 20). Enter the desired number of post alarm frames and their frame rates. Click on **SET** to save your modifications.
4. To define motion detection scroll up and select the **VMD area** tab. Fine-tuning the parameters and finally save your changes.
5. Now select the **Server setup** from the left-hand side menus. Then click on the **FTP** tab. Enter the IP address of the server where this camera is connected to (e.g. 192.168.6.2). In the login part use **ftp** for **User Name** and **a@b** for **Password**. Leave **Passive Mode** checked. Click on **SET** to save your modifications.

4. Camera setup for in-camera motion detection (HTTP-based)

Many IP cameras and video servers support in-camera motion detection and upload (push) of these event triggered images via FTP or HTTP to a video management system like NETAVIS. NETAVIS implements a general mechanism to handle this feature. However, the actual configuration of the motion detection algorithms must be done in the camera since each camera implements its own way of setting the parameters.

For setup of in-camera motion detection in NETAVIS please refer to the *NETAVIS Observer II User Manual*.

Below you find how to setup this feature in the camera so that it works together with NETAVIS.

Note: After setting up the camera:

- Do not forget to check and set the date and time of the camera to reflect your current time.
- Configure NETAVIS for in-camera motion detection by selecting the **Receive event images via HTTP** in the **Camera Admin** dialog too.

- Please note that when you change the value of an alarm parameter in the camera NETAVIS will have no notion about it. In this version of NETAVIS to reflect your changes you have to force the software to reread these parameters. To do so please change the state of the **Receive event images via HTTP** checkbox first to unchecked, save your changes. Then make your changes in the camera and save it. When you have finished change the state of the checkbox (in the NETAVIS client) back to checked and save your changes again.

Panasonic BB-HCM381

1. Start a browser connection to your camera and go to its **Setup** page.
2. Select **Trigger**. To setup a motion detection trigger for HTTP you HAVE TO setup the FIRST trigger. Please click on number **1**. This will start a wizard which navigates you through the whole setup procedure. Please fill in at least the following:
 - Do not check **Enable Image Buffer/Transfer**, select **Motion Detection** for **Trigger**, then click on **Next>**.
 - Check **Always**, then click on **Next>**.
 - Leave **Lens Position When Triggered** as it is, then click on **Next>**.
 - Leave **Image Setting** as it is, then click on **Next>**.
 - Check **Enable Pre-trigger Image Buffer** and set the number of images you wish to be included. Do the same for post-trigger images, then click on **Next>**.
 - Select **No Transfer, No Memory Overwrite** for **Transfer Method**, then click on **Next>**.
 - On the next page simply click on **Next>**.
 - Leave **E-mail notification when triggered** as it is, then click on **Next>**. On the last page please click **Save** to save our modifications.
3. To define motion detection and parameters please select **Motion detection** from the item list. After fine-tuning your motion detection parameters do not forget to save your changes.

Panasonic WV-NP472 and WV-NS324

1. Start a browser connection to your camera and go to its **Setup Menu** page.
2. First we will setup alarm recording parameters. To do so please select **Alarm**. Scroll down to the **Recording Setup** section and enter the desired number of pre/post alarm frames and their frame rates. Click on **SET & REBOOT** to save your modifications.
3. To define motion detection and parameters return to the main page of your camera and select **Camera Setup**. Using the on-screen menu set motion windows and parameters. After fine-tuning the parameters do not forget to save your changes.